INDEX

A

Air Conditioning in Industry, by W. L. Fleisher, A. E. Stacey, Jr., F. C. Houghten, and M. B. Ferderber, M.D. 59
Discussion 105
Air Conditioning in South Texas, Reactions of Office Workers to, by A. J. Rummel, F. E. Giesecke, W. H. Badgett and A. T. Moses 459
Air Conditioning Requirements of an Operating Room and Recovery Ward, by F. C. Houghten and W. Leigh Cook, Jr., M.D. 161
Discussion 174
Air Conditioning Systems, Fire Protection for, by R. C. Loughead 561
Discussion 571
Air Conditioning, The Application of Storage Refrigeration to, by Carl F. Boester 675
Discussion 680
Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density, by F. B. Rowley and Richard C. Jordan 339
Discussion 363
Air Filter Test Dust, A Standard, by Frank B. Rowley and Richard C. Jordan 681
Discussion 695
Air Inlet and Outlet on the Heat Output of Convectors, Effect of Size and Type of, by A. P. Kratz, M. K. Fahnestock and E. L. Broderick 523
Discussion 542
Air in Straight Ducts, Frictional Resistance to the Flow of, by F. C. Houghten, J. B. Schmieler, J. A. Zalovcik and N. Ivanovic 35
Discussion 58
Air-Velocity Meters, The Use of, by G. L. Tuve, D. K. Wright, Jr. and L. J. Seigel 645
Discussion 661
Authors' Closure 662
Albright, J. C., Analysis of Summer Weather Data in the United States..... 397
Discussion 428
Albright, J. C., Discussions on Analysis of Summer Weather Data in the United States 429
Application of Summer Weather Data in Design 439
Alford, J. S., J. E. Ryan and F. O. Urban, Effect of Heat Storage and Variation in Outdoor Temperature and Solar Intensity on Heat Transfer Through Walls 369
Discussion 396
Algren, A. B., C. E. Lund and F. B. Rowley, Condensation of Moisture and Its Relation to Building Construction and Operation 231
Discussion 250

ALLCUT, PROF. E. A., Discussion on Some Reflection and Radiation Characteristics of Aluminum 189
Aluminum, Some Reflection and Radiation Characteristics of, by CYRIL S. TAYLOR AND JUNIUS D. EDWARDS 179
Discussion 187
Analysis of Summer Weather Data in the United States, by J. C. ALBRIGHT... 397
Discussion 428
Annual Meeting, 1939, Forty-Fifth 1
Application of Storage Refrigeration to Air Conditioning, The, by CARL F. BOESTER 675
Discussion 680
Application of Summer Weather Data in Design, by JOHN EVERETTS, JR. 431
Discussion 439
ASHVE Research Technical Advisory Committee on Physiological Reactions, Report of the, (Recent Advances in Physiological Knowledge and Their Bearing on Ventilation Practice) 111
ASHVE Towards the Solid Fuel Industry, Responsibility of the, by W. A. DANIELSON 253
Atmospheric and Physiological Conditions, The Role of the Extremities in the Dissipation of Heat from the Body in Various, by CHARLES SHEARD, PH.D., MARVIN M. D. WILLIAMS, PH.D., GRACE M. ROTH, PH.D., AND BAYARD T. HORTON, M.D. 135
Discussion 151
AVERY, L. T., Discussion on Study of Summer Cooling in the Research Residence for the Summer of 1938 611

B

BADGETT, W. H., A. T. MOSES, A. J. RUMMEL AND F. E. GIESECKE, Reactions of Office Workers to Air Conditioning in South Texas 459
BEDFORD, DR. THOMAS, Discussion on Air Conditioning in Industry 105
BICHOWSKY, F. R., Discussion on Frictional Resistance of the Flow of Air in Straight Ducts 58
BLACKSHAW, J. L., Discussion on The Use of Air-Velocity Meters 662
Blood Flow, and Blood Volume Changes in Normal Individuals Subjected to Varying Environmental Temperatures, Cardiac Output, Peripheral, by FORD K. HICK, M.D., PH.D., ROBERT W. KEETON, M.D., NATHANIEL GLICKMAN, M.S., AND HARRY C. WALL, M.D. 123
Discussion 132
BOELTER, L. M. K., AND R. C. MARTINELLI, The Effect of Vibration Upon Free Convection from Horizontal Cylinders 483
BOELTER, L. M. K., Cooling Tower Performance Studies 615
BOESTER, CARL F., Discussion on The Application of Storage Refrigeration to Air Conditioning 680
BOESTER, CARL F., The Application of Storage Refrigeration to Air Conditioning 675
BRODERICK, E. L., A. P. KRATZ AND M. K. FAHNESTOCK, Effect of Size and Type of Air Inlet and Outlet on the Heat Output of Convectors 523
Discussion 542
BRODERICK, E. L., A. P. KRATZ, S. KONZO AND M. K. FAHNESTOCK, Study of Summer Cooling in the Research Residence for the Summer of 1938 591
Discussion 611
Authors' Closure 614
Building Construction and Operation Condensation of Moisture and Its Relation to, by F. B. ROWLEY, A. B. ALGREN AND C. E. LUND..... 231
Discussion 250

C

CAMPBELL, E. K., Discussion on Selection of Solid Fuels from the Viewpoint of the Small Consumer 268

Carbon, and Dust Particle Size and Density, Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of, by F. B. ROWLEY AND RICHARD C. JORDAN 339
Discussion 363

Cardiac Output, Peripheral Blood Flow, and Blood Volume Changes in Normal Individuals Subjected to Varying Environmental Temperatures, by FORD K. HICK, M.D., PH.D., ROBERT W. KEETON, M.D., NATHANIEL GLICKMAN, M.S., AND HARRY C. WALL, M.D. 123
Discussion 132

CARR, M. L., Discussion on A Study of the Heat Requirements of a Single-Glazed Test House and a Double-Glazed Test House 207

CARR, M. L., R. A. MILLER, LEIGHTON ORR AND DAVID SHORE, A Study of the Heat Requirements of a Single-Glazed Test House and a Double-Glazed Test House 195
Discussion 207

CARRIER, W. H., Discussion on Air Conditioning in Industry 106

CASHMAN, DR. B. Z., Discussion on Air Conditioning Requirements of an Operating Room and Recovery Ward 174

CLAY, WHARTON, Discussion on A Theory Covering the Transfer of Vapor Through Materials 558

CLOSE, P. D., Discussion on Some Reflection and Radiation Characteristics of Aluminum 190

Coals of Various Ranks, Smoke-Producing Tendencies in, by H. J. ROSE AND F. P. LASSETER 329
Discussion 336

Condensation of Moisture and Its Relation to Building Construction and Operation, by F. B. ROWLEY, A. B. ALGREN AND C. E. LUND 231
Discussion 250

Construction and Operation, Condensation of Moisture and Its Relation to Building, by F. B. ROWLEY, A. B. ALGREN AND C. E. LUND 231
Discussion 250

Consumer, Selection of Solid Fuels from the Viewpoint of the Small, by P. NICHOLLS 257
Discussion 266

Convection from Horizontal Cylinders, The Effect of Vibration Upon Free, by R. C. MARTINELLI AND L. M. K. BOELTER 483

Convectors, Effect of Size and Type of Air Inlet and Outlet on the Heat Output of, by A. P. KRATZ, M. K. FAHNESTOCK AND E. L. BRODERICK 523
Discussion 542

COOK, W. LEIGH, JR., M.D., AND F. C. HOUGHTEN, Air Conditioning Requirements of an Operating Room and Recovery Ward 161
Discussion 174

Cooling in the Research Residence for the Summer of 1938, Study of Summer, by A. P. KRATZ, S. KONZO, M. K. FAHNESTOCK AND E. L. BRODERICK..... 591
Discussion 611
Authors' Closure 614

Cooling Requirements in Washington, D. C., and Other Metropolitan Districts, Summer, by F. C. HOUGHTEN, CARL GUTBERLET AND ALBERT A. ROSENBERG 577
Discussion 587

Cooling Tower Performance Studies, by L. M. K. BOELTER 615

CUSHING, C. F., Discussion on Study of Summer Cooling in the Research Residence for the Summer of 1938 614

Cylinders, The Effect of Vibration Upon Free Convection from Horizontal, by R. C. MARTINELLI AND L. M. K. BOELTER 483

D

DAFTER, E. H., Discussion on Air Conditioning Requirements of an Operating Room and Recovery Ward 178
DANIELSON, COL. W. A., Discussions on Air Conditioning in Industry 106
Air Conditioning Requirements of an Operating Room and Recovery Ward... 177
A Theory Covering the Transfer of Vapor Through Materials 559
Evaluating Performance of Water Heaters Fired with Solid Fuels 507
Heat Transfer in Storage Water Heaters 228
Small Stokers 293
Some Reflection and Radiation Characteristics of Aluminum 192
DANIELSON, COL. W. A., Responsibility of the ASHVE Towards the Solid Fuel Industry 253
DEAN, F. J., JR., Discussion on The Application of Storage Refrigeration to Air Conditioning 680
Density, Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and, by F. B. ROWLEY AND RICHARD C. JORDAN 339
Discussion 363
DILL, R. S., Discussion on Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density 366
Dissipation of Heat from the Body in Various Atmospheric and Physiological Conditions, The Role of the Extremities in the, by CHARLES SHEARD, PH.D., MARVIN M. D. WILLIAMS, PH.D., GRACE M. ROTH, PH.D., AND BAYARD T. HORTON, M.D. 135
Discussion 151
DOHERTY, J. D., Discussion on Selection of Solid Fuels from the Viewpoint of the Small Consumer 267
Double-Glazed Test House, A Study of the Heat Requirements of a Single-Glazed Test House and a, by M. L. CARR, R. A. MILLER, LEIGHTON ORR AND DAVID SHORE 195
Discussion 207
Droop Characteristics of Thermostats, A Study of Certain Factors that Affect the, by BURTON E. SHAW AND LAVERNE LYON 663
DUBOIS, DR. E. F., Discussion on Cardiac Output, Peripheral Blood Flow, and Blood Volume Changes in Normal Individuals Subjected to Varying Environmental Temperatures 132
Ducts, Frictional Resistance to the Flow of Air In Straight, by F. C. HOUGHTEN, J. B. SCHMIELER, J. A. ZALOVCIK AND N. IVANOVIC 35
Discussion 58
Dust, A Standard Air Filter Test, by FRANK B. ROWLEY AND RICHARD C. JORDAN 681
Discussion 695
Dust Feed, Various Types of Carbon, and Dust Particle Size and Density, Air Filter Performance as Affected by Low Rate of, by F. B. ROWLEY AND RICHARD C. JORDAN 339
Discussion 363

E

EDWARDS, J. D., Discussions on A Study of the Heat Requirements of a Single-Glazed Test House and a Double-Glazed Test House 210
Some Reflection and Radiation Characteristics of Aluminum 192

EDWARDS, JUNIUS D., AND CYRIL S. TAYLOR, Some Reflection and Radiation Characteristics of Aluminum 179
Discussion 187
Effect of Heat Storage and Variation in Outdoor Temperature and Solar Intensity on Heat Transfer Through Walls, by J. S. ALFORD, J. E. RYAN AND F. O. URBAN 369
Discussion 396
Effect of Size and Type of Air Inlet and Outlet on the Heat Output of Convectors, by A. P. KRATZ, M. K. FAHNESTOCK AND E. L. BRODERICK 523
Discussion 542
Effect of Vibration Upon Free Convection from Horizontal Cylinders, The, by R. C. MARTINELLI AND L. M. K. BOELTER 483
Effective Temperature, Skin Temperatures of the Extremities and, by CHARLES SHEARD, PH.D., MARVIN M. D. WILLIAMS, PH.D., AND BAYARD T. HORTON, M.D. 153
ENGDAHL, R. B., A. P. KRATZ AND S. KONZO, Performance of Stoker-Fired and Hand-Fired Warm-Air Furnaces in the Research Residence 297
Discussion 320
Environmental Temperatures, Cardiac Output, Peripheral Blood Flow, and Blood Volume Changes in Normal Individuals Subjected to Varying, by FORD K. HICK, M.D., PH.D., ROBERT W. KEETON, M.D., NATHANIEL GLICKMAN, M.S., AND HARRY C. WALL, M.D. 123
Discussion 132
Evaluating Performance of Water Heaters Fired with Solid Fuels, by H. J. ROSE AND R. C. JOHNSON 499
Discussion 506
EVANS, E. C., Discussion on Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density 365
EVERETTS, JOHN, JR., Application of Summer Weather Data in Design 431
Discussion 439
EVERETTS, JOHN, JR., Discussions on Application of Summer Weather Data in Design 439
Study of Summer Cooling in the Research Residence for the Summer of 1938 614

F

Factors that Affect the Droop Characteristics of Thermostats, A Study of Certain, by BURTON E. SHAW AND LAVERNE LYON 663
FAHNESTOCK, M. K., Discussions on Effect of Size and Type of Air Inlet and Outlet on the Heat Output of Convectors 544
The Use of Air-Velocity Meters 661
FAHNESTOCK, M. K., E. L. BRODERICK, A. P. KRATZ AND S. KONZO, Study of Summer Cooling in the Research Residence for the Summer of 1938..... 591
Discussion 611
Authors' Closure 614
FAHNESTOCK, M. K., E. L. BRODERICK AND A. P. KRATZ, Effect of Size and Type of Air Inlet and Outlet on the Heat Output of Convectors 523
Discussion 542
Fall Meeting, 1939 639
FERDERBER, DR. M. B., Discussions on Air Conditioning Requirements of an Operating Room and Recovery Ward 175
Ozone in Ventilation—Its Possibilities and Limitations 521
Summer Cooling Requirements in Washington, D. C., and Other Metropolitan Districts 589
The Role of the Extremities in the Dissipation of Heat from the Body in Various Atmospheric and Physiological Conditions 151
FERDERBER, M. B., M.D., W. L. FLEISHER, A. E. STACEY, JR., AND F. C. HOUGHTEN, Air Conditioning in Industry 59
Discussion 105

XUM

FERGUSON, J. H., Discussion on Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density 367
Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density, by F. B. ROWLEY AND RICHARD C. JORDAN 339
Discussion 363
Filter Test Dust, A Standard Air, by FRANK B. ROWLEY AND RICHARD C. JORDAN 681
Discussion 695
Fire Protection for Air Conditioning Systems, by R. C. LOUGHEAD 561
Discussion 571
FITTS, J. C., Discussion on Heating Low-Cost Homes 496
FLEISHER, W. L., A. E. STACEY, JR., F. C. HOUGHTEN AND M. B. FERDERBER, M.D., Air Conditioning in Industry 59
Discussion 105
FLEISHER, W. L., Discussions on Air Conditioning in Industry 106
Analysis of Summer Weather Data in the United States 428
Application of Summer Weather Data in Design 439
Cardiac Output, Peripheral Blood Flow, and Blood Volume Changes in Normal Individuals Subjected to Varying Environmental Temperatures 132
Flow of Air in Straight Ducts, Frictional Resistance to the, by F. C. HOUGHTEN, J. B. SCHMIELER, J. A. ZALOVCIK AND N. IVANOVIC 35
Discussion 58
Flow of Heat Through Walls, The, by F. E. GIESECKE 441
Discussion 457
Forty-Fifth Annual Meeting, 1939 1
Frictional Resistance to the Flow of Air in Straight Ducts, by F. C. HOUGHTEN, J. B. SCHMIELER, J. A. ZALOVCIK AND N. IVANOVIC 35
Discussion 58
Fuel Industry, Responsibility of the ASHVE Towards the Solid, by W. A. DANIELSON 253
Fuels, Evaluating Performance of Water Heaters Fired with Solid, by H. J. ROSE AND R. C. JOHNSON 499
Discussion 506
Furnaces in the Research Residence, Performance of Stoker-Fired and Hand-Fired Warm-Air, by A. P. KRATZ, S. KONZO AND R. B. ENGDAHL 297
Discussion 320

G

GIESECKE, PROF. F. E., Discussion on Effect of Heat Storage and Variation in Outdoor Temperature and Solar Intensity on Heat Transfer Through Walls 396
GIESECKE, F. E., W. H. BADGETT, A. T. MOSES AND A. J. RUMMEL, Reactions of Office Workers to Air Conditioning in South Texas 459
GIESECKE, PROF. F. E., Discussion on The Flow of Heat Through Walls 457
GIESECKE, F. E., The Flow of Heat Through Walls 441
Discussion 457
GLICKMAN, NATHANIEL, M.S., HARRY C. WALL, M.D., FORD K. HICK, M.D., PH.D., AND ROBERT W. KEETON, M.D., Cardiac Output, Peripheral Blood Flow, and Blood Volume Changes in Normal Individuals Subjected to Varying Environmental Temperatures 123
Discussion 132
GURNEY, E. HOLT, Discussions on Air Conditioning in Industry 107
Effect of Size and Type of Air Inlet and Outlet on the Heat Output of Convectors 544

GUTBERTLET, CARL, ALBERT A. ROSENBERG AND F. C. HOUGHTEN, Summer Cooling Requirements in Washington, D.C., and Other Metropolitan Districts... 577
Discussion ... 587

H

Hand-Fired Warm-Air Furnaces in the Research Residence, Performance of Stoker-Fired and, by A. P. KRATZ, S. KONZO AND R. B. ENGDAHL... 297
Discussion ... 320
HART, H. M., Discussion on Effect of Size and Type of Air Inlet and Outlet on the Heat Output of Convectors ... 544
Heat from the Body in Various Atmospheric and Physiological Conditions, The Role of the Extremities in the Dissipation of, by CHARLES SHEARD, PH.D., MARVIN M. D. WILLIAMS, PH.D., GRACE M. ROTH, PH.D., AND BAYARD T. HORTON, M.D. ... 135
Discussion ... 151
Heat Output of Convectors, Effect of Size and Type of Air Inlet and Outlet on the, by A. P. KRATZ, M. K. FAHNESTOCK AND E. L. BRODERICK... 523
Discussion ... 542
Heat Requirements of a Single-Glazed Test House and a Double-Glazed Test House, A Study of the, by M. L. CARR, R. A. MILLER, LEIGHTON ORR AND DAVID SHORE ... 195
Discussion ... 207
Heat Storage and Variation in Outdoor Temperature and Solar Intensity on Heat Transfer Through Walls, Effect of, by J. S. ALFORD, J. E. RYAN AND F. O. URBAN ... 369
Discussion ... 396
Heat Through Walls, The Flow of, by F. E. GIESECKE ... 441
Discussion ... 457
Heat Transfer in Storage Water Heaters, by D. W. NELSON AND A. A. ROSENBERG ... 213
Discussion ... 227
Heaters Fired with Solid Fuels, Evaluating Performance of Water, by H. J. ROSE AND R. C. JOHNSON ... 499
Discussion ... 506
Heaters, Heat Transfer in Storage Water, by D. W. NELSON AND A. A. ROSENBERG ... 213
Discussion ... 227
Heating Low-Cost Homes, by ROBERT K. THULMAN AND L. E. SEELEY... 489
Discussion ... 495
HEILMAN, R. H., Discussion on A Theory Covering the Transfer of Vapor Through Materials ... 556
HERSHEY, A. E., Discussion on The Use of Air-Velocity Meters ... 661
HESS, A. J., Discussion on Fire Protection for Air Conditioning Systems 574
HEWETT, J. B., Discussion on Fire Protection for Air Conditioning Systems 576
HICK, DR. F. K., Discussion on Cardiac Output, Peripheral Blood Flow, and Blood Volume Changes in Normal Individuals Subjected to Varying Environmental Temperatures ... 133
HICK, FORD K., M.D., PH.D., ROBERT W. KEETON, M.D., NATHANIEL GLICKMAN, M.S., AND HARRY C. WALL, M.D., Cardiac Output, Peripheral Blood Flow, and Blood Volume Changes in Normal Individuals Subjected to Varying Environmental Temperatures ... 123
Discussion ... 132
HODGE, W. B., Discussion on Air Conditioning in Industry ... 106
HOLT, PROF. JAMES, Discussion on Air Conditioning in Industry ... 106
Homes, Heating Low-Cost, by ROBERT K. THULMAN AND L. E. SEELEY ... 489
Discussion ... 495

HORTON, BAYARD T., M.D., CHARLES SHEARD, PH.D. AND MARVIN M. D. WILLIAMS, PH.D., Skin Temperatures of the Extremities and Effective Temperature 153

HORTON, BAYARD T., M.D., CHARLES SHEARD, PH.D., MARVIN M. D. WILLIAMS, PH.D., AND GRACE M. ROTH, PH.D., The Role of Extremities in the Dissipation of Heat from the Body in Various Atmospheric and Physiological Conditions 135
Discussion 151

HOUGHTEN, F. C., AND W. LEIGH COOK, JR., M.D., Air Conditioning Requirements of an Operating Room and Recovery Ward 161
Discussion 174

HOUGHTEN, F. C., CARL GUTBERLET AND ALBERT A. ROSENBERG, Summer Cooling Requirements in Washington, D. C., and Other Metropolitan Districts 577
Discussion 587

HOUGHTEN, F. C., Discussions on Air Conditioning in Industry 107
Air Conditioning Requirements of an Operating Room and Recovery Ward 177
The Flow of Air in Straight Ducts 58

HOUGHTEN, F. C., J.B. SCHMIELER, J. A. ZALOVCIK AND N. IVANOVIC, Frictional Frictional Resistance to the Flow of Air in Straight Ducts 58
Discussion 58

HOUGHTEN, F. C., M. B. FERDERBER, M.D., W. L. FLEISHER AND A. E. STACEY, JR., Air Conditioning in Industry 59
Discussion 105

HUKILL, W. V., Discussion on A Theory Covering the Transfer of Vapor Through Materials 555

HUMPHREYS, PROF. C. M., Discussion on Fire Protection for Air Conditioning Systems 576
Heating Low-Cost Homes 497

HYNES, L. P., Discussion on Small Stokers 295

I

Industry, Air Conditioning in, by W. L. FLEISHER, A. E. STACEY, JR., F. C. HOUGHTEN AND M. B. FERDERBER, M.D. 59
Discussion 105

Industry, Responsibility of the ASHVE Towards the Solid Fuel, by W. A. DANIELSON 253

In Memoriam 699

IVANOVIC, N., F. C. HOUGHTEN, J. B. SCHEMIELER AND J. A. ZALOVCIK, Frictional Resistance to the Flof of Air in Straight Ducts 35
Discussion 58

J

JAMES, JOHN, Discussion on Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density 366

JAMES, JOHN, Discussion on Evaluating Performance of Water Heaters Fired with Solid Fuels 507

JOHNSON, A. J., Discussions on Evaluating Performance of Water Heaters Fired with Solid Fuels 506
Performance of Stoker-Fired and Hand-Fired Warm-Air Furnaces in the Research Residence 320

JOHNSON, R. C., AND H. J. ROSE, Evaluating Performance of Water Heaters Fired with Solid Fuels 499
Discussion 506

JORDAN, RICHARD C., AND F. B. ROWLEY, Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density 339
Discussion 363

JORDAN, RICHARD C., AND FRANK B. ROWLEY, A Standard Air Filter Test Dust 681
Discussion ... 695

K

KEETON, DR. R. W., Discussion on Air Conditioning Requirements of an Operating Room and Recovery Ward ... 175
KEETON, ROBERT W., M.D., NATHANIEL GLICKMAN, M.S., HARRY C. WALL, M.D., AND FORD K. HICK, M.D., PH.D., Cardiac Output, Peripheral Blood Flow, and Blood Volume Changes in Normal Individuals Subjected to Varying Environmental Temperatures ... 123
Discussion ... 132
KELLY, W. C., Discussions on Small Stokers ... 294
Smoke-Producing Tendencies in Coals of Various Ranks ... 336
KERSHAW, M. G., Discussion on Summer Cooling Requirements in Washington, D. C., and Other Metropolitan Districts ... 588
KONZO, S., M. K. FAHNESTOCK, E. L. BRODERICK AND A. P. KRATZ, Study of Summer Cooling in the Research Residence for the Summer of 1938.... 591
Discussion ... 611
Author's Closure ... 614
KONZO, S., R. B. ENGDAHL AND A. P. KRATZ, Performance of Stoker-Fired and Hand-Fired Warm-Air Furnaces in the Research Residence ... 297
Discussion ... 320
KRATZ, A. P., M. K. FAHNESTOCK AND E. L. BRODERICK, Effect of Size and Type of Air Inlet and Outlet on the Heat Output of Convectors ... 523
Discussion ... 542
KRATZ, A. P., S. KONZO AND R. B. ENGDAHL, Performance of Stoker-Fired and Hand-Fired Warm-Air Furnaces in the Research Residence ... 297
Discussion ... 320
KRATZ, A. P., S. KONZO, M. K. FAHNESTOCK AND E. L. BRODERICK, Study of Summer Cooling in the Research Residence for the Summer of 1938 591
Discussion ... 611
Authors' Closure ... 614
KRATZ, PROF. A. P., Discussion on Selection of Solid Fuels from the Viewpoint of the Small Consumer ... 268
KREUTTNER, J. W., Discussion on Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density ... 367

L

LASSETER, F. P., AND H. J. ROSE, Smoke-Producing Tendencies in Coals of Various Ranks ... 329
Discussion ... 336
LLOYD, E. C., Discussion on A Theory Covering the Transfer of Vapor Through Materials ... 554
LOUGHEAD, R. C., Fire Protection for Air Conditioning Systems ... 561
Discussion ... 571
Low-Cost Homes, Heating, by ROBERT K. THULMAN AND L. E. SEELEY ... 489
Discussion ... 495
Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density, Air Filter Performance as Affected by, by F. B. ROWLEY AND RICHARD C. JORDAN ... 339
Discussion ... 363
LUND, C. E., F. B. ROWLEY AND A. B. ALGREN, Condensation of Moisture and Its Relation to Building Construction and Operation ... 231
Discussion ... 250

XUM

LYON, LAVERNE, AND BURTON E. SHAW, A Study of Certain Factors that Affect the Droop Characteristics of Thermostats 663

M

MALLY, C. F., Discussions on A Theory Covering the Transfer of Vapor Through Materials 560
Heating Low-Cost Homes 498
MARIN, PROF. AXEL, Discussion on Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density 367
MARSHALL, A. W., Discussion on Selection of Solid Fuels from the Viewpoint of the Small Consumer 266
MARTINELLI, R. C., AND L. M. K. BOELTER, The Effect of Vibration Upon Free Convection from Horizontal Cylinders 483
MAY, J. W., Discussion on Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density 364
MAYETTE, C. E., Discussion on Heating Low-Cost Homes 495
MCDERMOTT, P. F., Discussions on A Theory Covering the Transfer of Vapor Through Materials 556
Some Reflection and Radiation Characteristics of Aluminum 190
MCELGIN, JOHN, Discussion on Effect of Size and Type of Air Inlet and Outlet on the Heat Output of Convectors 543
Meetings—1939
Annual (Pittsburgh, Pa.) I
Fall (Atlanta, Ga.) 639
Semi-Annual (Mackinac Island, Mich.) 475
MELLER, H. B., Smoke Abatement—Where to Draw the Line 323
Meters, The Use of Air-Velocity, by G. L. TUVE, D. K. WRIGHT, JR. AND L. J. SEIGEL 645
Discussion 661
Authors' Closure 662
MEYER, H. C., JR., Discussion on Heating Low-Cost Homes 495
MILLER, PROF. W. T., Discussion on Condensation of Moisture and Its Relation to Building Construction and Operation 250
MILLER, R. A., Discussions on A Study of the Heat Requirements of a Single-Glazed Test House and a Double-Glazed Test House 210
Condensation of Moisture and Its Relation to Building Construction and Operation 250
MILLER, R. A., LEIGHTON ORR, DAVID SHORE, AND M. L. CARR, A Study of the Heat Requirements of a Single-Glazed Test House and a Double-Glazed Test House 195
Discussion 207
MILLS, DR. C. A., Discussion on Summer Cooling Requirements in Washington, D. C., and Other Metropolitan Districts 587
Moisture and Its Relation to Building Construction and Operation, Condensation of, by F. B. ROWLEY, A. B. ALGREN AND C. E. LUND 231
Discussion 250
MOSES, A. T., A. J. RUMMEL, F. E. GIESECKE, AND W. H. BADGETT, Reactions of Office Workers to Air Conditioning in South Texas 459
MULCEY, PAUL A., AND RALPH A. SHERMAN, Small Stokers 269
Discussion 293
MULCEY, P. A., Discussion on Small Stokers 293
MURPHY, H. C., Discussions on Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density 365
Fire Protection for Air Conditioning Systems 571

N

NELSON, D. W., AND A. A. ROSENBERG, Heat Transfer in Storage Water Heaters 213
Discussion 227
NELSON, D. W., Discussions on Heat Transfer in Storage Water Heaters 228
The Use of Air-Velocity Meters 661
NEWTON, A. P., Discussion on Study of Summer Cooling in the Research Residence for the Summer of 1938 613
NICHOLLS, P., Discussion on Selection of Solid Fuels from the Viewpoint of the Small Consumer 268
NICHOLLS, P., Selection of Solid Fuels from the Viewpoint of the Small Consumer 257
Discussion 266
NOBIS, H. M., Discussion on Heat Transfer in Storage Water Heaters 228
NORRIS, R. H., Discussion on Effect of Size and Type of Air Inlet and Outlet on the Heat Output of Convectors 542
NUTTING, ARTHUR, Discussions on Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density 363
A Standard Air Filter Test Dust 695

O

Office Workers to Air Conditioning in South Texas, Reactions of, by A. J. RUMMEL, F. E. GIESECKE, W. H. BADGETT AND A. T. MOSES 459
Operating Room and Recovery Ward, Air Conditioning Requirements of an, by F. C. HOUGHTEN AND W. LEIGH COOK, JR., M.D. 161
Discussion 174
Operation, Condensation of Moisture and Its Relation to Building Construction and, by F. B. ROWLEY, A. B. ALGREN AND C. E. LUND 231
Discussion 250
ORR, LEIGHTON, DAVID SHORE, M. L. CARR AND R. A. MILLER, A Study of the Heat Requirements of a Single-Glazed Test House and a Double-Glazed Test House 195
Discussion 207
ORR, LEIGHTON, Discussion on A Study of the Heat Requirements of a Single-Glazed Test House and a Double-Glazed Test House 211
OTTINGER, W. J., Discussion on Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density 364
Ozone in Ventilation—Its Possibilities and Limitations, by WILLIAM N. WITHERIDGE AND CONSTANTIN P. YAGLOU 509
Discussion 520

P

PENNEY, G. W., Discussions on Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density 364
Some Reflection and Radiation Characteristics of Aluminum 192
Performance of Stoker-Fired and Hand-Fired Warm-Air Furnaces in the Research Residence, by A. P KRATZ, S. KONZO AND R. B. ENGDAHL 297
Discussion 320
Performance of Water Heaters Fired with Solid Fuels, Evaluating, by H. J. ROSE AND R. C. JOHNSON 499
Discussion 506
Performance Studies, Cooling Tower, by L. M. K. BOELTER 615

XUM

Peripheral Blood Flow, and Blood Volume Changes in Normal Individuals Subjected to Varying Environmental Temperatures, Cardiac Output, by FORD K. HICK, M.D., PH.D., ROBERT W. KEETON, M.D., NATHANIEL GLICKMAN, M.S., AND HARRY C. WALL, M.D. 123
Discussion 132
Physiological Knowledge and Their Bearing on Ventilation Practice, Recent Advances in 111

R

Radiation Characteristics of Aluminum, Some Reflection and, by CYRIL S. TAYLOR AND JUNIUS D. EDWARDS 179
Discussion 187
RANDALL, W. C., Discussion on A Study of the Heat Requirements of a Single-Glazed Test House and a Double-Glazed Test House 209
RANDOLPH, C. H., AND ERNEST SZEKELY, Discussion on Effect of Size and Type of Air Inlet and Outlet on the Heat Output of Convectors 544
RANDOLPH, C. H., Discussion on The Use of Air-Velocity Meters 662
Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density, Air Filter Performance as Affected by Low, by F. B. ROWLEY AND RICHARD C. JORDAN 339
Discussion 363
Reactions of Office Workers to Air Conditioning in South Texas, by A. J. RUMMEL, F. E. GIESECKE, W. H. BADGETT AND A. T. MOSES 459
Recent Advances in Physiological Knowledge and Their Bearing on Ventilation Practice—Report of the ASHVE Research Technical Advisory Committee on Physiological Reactions, C.-E. A. WINSLOW, Chairman 111
Recovery Ward, Air Conditioning Requirements of an Operating Room and, by F. C. HOUGHTEN AND W. LEIGH COOK, JR., M.D. 161
Discussion 174
Refrigeration to Air Conditioning, The Application of Storage, by CARL F. BOESTER 675
Discussion 680
REID, W. T., Discussion on Small Stokers 293
Requirements of an Operating Room and Recovery Ward, Air Conditioning, by F. C. HOUGHTEN AND W. LEIGH COOK, JR., M.D. 161
Discussion 174
Research Residence for the Summer of 1938, Study of Summer Cooling in the, by A. P. KRATZ, S. KONZO, M. K. FAHNESTOCK AND E. L. BRODERICK.... 591
Discussion 611
Authors' Closure 614
Research Residence, Performance of Stoker-Fired and Hand-Fired Warm-Air Furnaces in the, by A. P. KRATZ, S. KONZO AND R. B. ENGDAHL..... 297
Discussion 320
Resistance to the Flow of Air in Straight Ducts, Frictional, by F. C. HOUGHTEN, J. B. SCHMIELER, J. A. ZALOVCIK AND N. IVANOVIC 35
Discussion 58
Responsibility of the ASHVE Towards the Solid Fuel Industry, by W. A. DANIELSON 253
RHOTON, W. R., Discussion on A Study of the Heat Requirements of a Single-Glazed Test House and a Double-Glazed Test House 209
RIETZ, E. W., Discussion on Heat Transfer in Storage Water Heaters 228
Role of the Extremities in the Dissipation of Heat from the Body in Various Atmospheric and Physiological Conditions, The, by CHARLES SHEARD, PH.D., MARVIN M. D. WILLIAMS, PH.D., GRACE M. ROTH, PH.D., AND BAYARD T. HORTON, M.D. 135
Discussion 151

ROSE, H. J., AND F. P. LASSETER, Smoke-Producing Tendencies in Coals of Various Ranks 329
Discussion 336

ROSE, H. J., AND R. C. JOHNSON, Evaluating Performance of Water Heaters Fired with Solid Fuels 499
Discussion 506

ROSE, H. J., Discussions on Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density.. 368
Selection of Solid Fuels from the Viewpoint of the Small Consumer 267
Smoke-Producing Tendencies in Coals of Various Ranks 336

ROSENBERG, A. A., AND D. W. NELSON, Heat Transfer in Storage Water Heaters 213
Discussion 227

ROSENBERG, ALBERT A., F. C. HOUGHTEN AND CARL GUTBERLET, Summer Cooling Requirements in Washington, D. C., and Other Metropolitan Districts 577
Discussion 587

ROTH, GRACE M., PH.D., BAYARD T. HORTON, M.D., CHARLES SHEARD, PH.D., AND MARVIN M. D. WILLIAMS, PH.D., The Role of Extremities in the Dissipation of Heat from the Body in Various Atmospheric and Physiological Conditions 135
Discussion 151

ROWE, W. A., Discussion on Effect of Size and Type of Air Inlet and Outlet on the Heat Output of Convectors 542

ROWLEY, F. B., A. B. ALGREN AND C. E. LUND, Condensation of Moisture and Its Relation to Building Construction and Operation 231
Discussion 250

ROWLEY,. F. B., AND RICHARD C. JORDAN, Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density 339
Discussion 363

ROWLEY, FRANK B., AND RICHARD C. JORDAN, A Standard Air Filter Test Dust 681
Discussion 695

ROWLEY, FRANK B., A Theory Covering the Transfer of Vapor through Materials 545
Discussion 554

ROWLEY, FRANK B., Discussions on Air Conditioning in Industry 109
Air Filter Performance as Affected by Low Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density 364
A Standard Air Filter Test Dust 697
A Theory Covering the Transfer of Vapor Through Materials 560
Condensation of Moisture and Its Relation to Building Construction and Operation 250
Some Reflection and Radiation Characteristics of Aluminum 192

RUMMEL, A. J., F. E. GIESECKE, W. H. BADGETT AND A. T. MOSES, Reactions of Office Workers to Air Conditioning in South Texas 459

RYAN, J. E., Discussions on Air Filter Performance as Affected by Rate of Dust Feed, Various Types of Carbon, and Dust Particle Size and Density .. 368
Analysis of Summer Weather Data in the United States 428
The Flow of Heat Through Walls 457

RYAN, J. E., F. O. URBAN AND J. S. ALFORD, Effect of Heat Storage and Variation in Outdoor Temperature and Solar Intensity on Heat Transfer Through Walls 369
Discussion 396

XUM

S

SCANLON, C. J., Discussion on Performance of Stoker-Fired and Hand-Fired Warm-Air Furnaces in the Research Residence 320
SCHMIELER, J. B., J. A. ZALOVCIK, N. IVANOVIC AND F. C. HOUGHTEN, Frictional Resistance to the Flow of Air in Straight Ducts 35
Discussion 58
SEELEY, L. E., AND ROBERT K. THULMAN, Heating Low-Cost Homes 489
Discussion 495
SEIGEL, L. J., G. L. TUVE AND D. K. WRIGHT, JR., The Use of Air-Velocity Meters 645
Discussion 661
Authors' Closure 662
Selection of Solid Fuels from the Viewpoint of the Small Consumer, by P. NICHOLLS 257
Discussion 266
SELIG, E. T., JR., Discussion on Evaluating Performance of Water Heaters Fired with Solid Fuels 507
Semi-Annual Meeting, 1939 475
SHAW, BURTON E., AND LAVERNE LYON, A Study of Certain Factors that Affect the Droop Characteristics of Thermostats 663
SHEARD, CHARLES, PH.D., MARVIN M. D. WILLIAMS, PH.D., AND BAYARD T. HORTON, M.D., Skin Temperatures of the Extremities and Effective Temperature 153
SHEARD, CHARLES, PH.D., MARVIN M. D. WILLIAMS, PH.D., GRACE M. ROTH, PH.D., AND BAYARD T. HORTON, M.D., The Role of the Extremities in the Dissipation of Heat from the Body in Various Atmospheric and Physiological Conditions 135
Discussion 151
SHEARD, CHARLES, Discussion on Air Conditioning Requirements of an Operating Room and Recovery Ward 176
SHERMAN, RALPH A., AND PAUL A. MULCEY, Small Stokers 269
Discussion 293
SHERMAN, R. A., Discussion on Small Stokers 294
SHORE, DAVID, M. L. CARR, R. A. MILLER, AND LEIGHTON ORR, A Study of the Heat Requirements of a Single-Glazed Test House and a Double-Glazed Test House 195
Discussion 207
Single-Glazed Test House and a Double-Glazed Test House, A Study of the Heat Requirements of a, by M. L. CARR, R. A. MILLER, LEIGHTON ORR AND DAVID SHORE 195
Discussion 207
Skin Temperatures of the Extremities and Effective Temperature, by CHARLES SHEARD, PH.D., MARVIN M. D. WILLIAMS, PH.D. AND BAYARD T. HORTON, M.D. 153
Small Stokers, by PAUL A. MULCEY AND RALPH A. SHERMAN 269
Discussion 293
Smoke Abatement—Where to Draw the Line, by H. B. MELLER 323
Smoke-Producing Tendencies in Coals of Various Ranks, by H. J. ROSE AND F. P. LASSETER 329
Discussion 336
SMYTH, DR. HENRY F., JR., Discussion on Ozone in Ventilation—Its Possibilities and Limitations 520
Solar Intensity on Heat Transfer Through Walls, Effect of Heat Storage and Variation in Outdoor Temperature and, by J. S. ALFORD, J. E. RYAN AND F. O. URBAN 369
Discussion 396

Solid Fuel Industry, Responsibility of the ASHVE Towards the, by W. A. DANIELSON 253
Solid Fuels from the Viewpoint of the Small Consumer, Selection of, by P. NICHOLLS 257
Discussion 266
Some Reflection and Radiation Characteristics of Aluminum, by CYRIL S. TAYLOR AND JUNIUS D. EDWARDS 179
Discussion 189
South Texas, Reactions of Office Workers to Air Conditioning in, by A. J. RUMMEL, F. E. GIESECKE, W. H. BADGETT AND A. T. MOSES 459
STACEY, A. E., JR., F. C. HOUGHTEN, M. B. FERDERBER, M.D., AND W. L. FLEISHER, Air Conditioning in Industry 59
Discussion 105
Standard Air Filter Test Dust, A, by FRANK B. ROWLEY AND RICHARD C. JORDAN 681
Discussion 695
STARK, W. E., Discussion on Heating Low-Cost Homes 496
Stoker-Fired and Hand-Fired Warm-Air Furnaces in the Research Residence, Performance of, by A. P. KRATZ, S. KONZO AND R. B. ENGDAHL 297
Discussion 320
Stokers, Small, by PAUL A. MULCEY AND RALPH A. SHERMAN 269
Discussion 293
Storage and Variation in Outdoor Temperature and Solar Intensity on Heat Transfer Through Walls, Effect of Heat, by J. S. ALFORD, J. E. RYAN AND F. O. URBAN 369
Discussion 396
Storage Refrigeration to Air Conditioning, The Application of, by CARL F. BOESTER 675
Discussion 680
Storage Water Heaters, Heat Transfer in, by D. W. NELSON AND A. A. ROSENBERG 213
Discussion 227
Study of Certain Factors that Affect the Droop Characteristics of Thermostats, A, by BURTON E. SHAW AND LAVERNE LYON 663
Study of Summer Cooling in the Research Residence for the Summer of 1938, by A. P. KRATZ, S. KONZO, M. K. FAHNESTOCK AND E. L. BRODERICK.... 591
Discussion 611
Authors' Closure 614
Study of the Heat Requirements of a Single-Glazed Test House and a Double-Glazed Test House, A, by M. L. CARR, R. A. MILLER, LEIGHTON ORR AND DAVID SHORE 195
Discussion 207
Summer Cooling in the Research Residence for the Summer of 1938, Study of, by A. P. KRATZ, S. KONZO, M. K. FAHNESTOCK AND E. L. BRODERICK.... 591
Discussion 611
Authors' Closure 614
Summer Cooling Requirements in Washington, D. C., and Other Metropolitan Districts, by F. C. HOUGHTEN, CARL GUTBERLET AND ALBERT A. ROSENBERG 577
Discussion 587
Summer Weather Data in Design, Application of, by JOHN EVERETTS, JR. 431
Discussion 439
Summer Weather Data in the United States, Analysis of, by J. C. ALBRIGHT.. 397
Discussion 428
SZEKELY, ERNEST, AND C. H. RANDOLPH, Discussion on Effect of Size and Type of Air Inlet and Outlet on the Heat Output of Convectors 544
SZEKELEY, ERNEST, Discussion on Fire Protection for Air Conditioning Systems 573

T

TASKER, C., Discussions on Heating Low-Cost Homes 498
Summer Cooling Requirements in Washington, D. C., and Other Metropolitan Districts 589
TAYLOR, CYRIL S., AND JUNIUS D. EDWARDS, Some Reflection and Radiation Characteristics of Aluminum 179
Discussion 189
Temperature and Solar Intensity on Heat Transfer Through Walls, Effect of Heat Storage and Variation in Outdoor, by J. S. ALFORD, J. E. RYAN AND F. O. URBAN 369
Discussion 396
Temperatures, Cardiac Output, Peripheral Blood Flow, and Blood Volume Changes in Normal Individuals Subjected to Varying Environmental, by FORD K. HICK, M.D., PH.D., ROBERT W. KEETON, M.D., NATHANIEL GLICKMAN, M.S., AND HARRY C. WALL, M.D. 123
Discussion 132
Temperatures of the Extremities and Effective Temperature, Skin, by CHARLES SHEARD, PH.D., MARVIN M. D. WILLIAMS, PH.D., AND BAYARD T. HORTON, M.D. 153
Test Dust, A Standard Air Filter, by FRANK B. ROWLEY AND RICHARD C. JORDAN 681
Discussion 695
Test House, A Study of the Heat Requirements of a Single-Glazed Test House and a Double-Glazed, by M. L. CARR, R. A. MILLER, LEIGHTON ORR AND DAVID SHORE 195
Discussion 207
Texas, Reactions of Office Workers to Air Conditioning in South, by A. J. RUMMEL, F. E. GIESECKE, W. H. BADGETT AND A. T. MOSES 459
Theory Covering the Transfer of Vapor Through Materials, A, by FRANK B. ROWLEY 545
Discussion 554
Thermostats, A Study of Certain Factors that Affect the Droop Characteristics of, by BURTON E. SHAW AND LAVERNE LYON 663
THULMAN, ROBERT K., AND L. E. SEELEY, Heating Low-Cost Homes 489
Discussion 495
Tower Performance Studies, Cooling, by L. M. K. BOELTER 615
TUVE, G. L., D. K. WRIGHT, JR. AND L. J. SEIGEL, The Use of Air-Velocity Meters 645
Discussion 661
Authors' Closure 662
TUVE, PROF. G. L., Discussion on Heat Transfer in Storage Water Heaters.... 227

U

URBAN, F. O., J. S. ALFORD AND J. E. RYAN, Effect of Heat Storage and Variation in Outdoor Temperature and Solar Intensity on Heat Transfer Through Walls 369
Discussion 396
URDAHL, T. H., Discussions on Analysis of Summer Weather Data in the United States 429
Heating Low-Cost Homes 497
Small Stokers 296
Study of Summer Cooling in the Research Residence for the Summer of 1938 612
Summer Cooling Requirements in Washington, D. C., and Other Metropolitan Districts 588
Use of Air-Velocity Meters, The, by G. L. TUVE, D. K. WRIGHT, JR. AND L. J. SEIGEL 645
Discussion 661
Authors' Closure 662

V

Vapor Through Materials, A Theory Covering the Transfer of, by FRANK B. ROWLEY 545
Discussion 554

Ventilation—Its Possibilities and Limitations, Ozone in, by WILLIAM N. WITHERIDGE AND CONSTANTIN P. YAGLOU 509
Discussion 520

Ventilation Practice, Recent Advances in Physiological Knowledge and Their Bearing on 111

W

WALKER, J. H., Discussion on Effect of Heat Storage and Variation in Outdoor Temperature and Solar Intensity on Heat Transfer Through Walls 396

WALL, HARRY C., M.D., FORD K. HICK, M.D., PH.D., ROBERT W. KEETON, M.D., AND NATHANIEL GLICKMAN, M.S., Cardiac Output, Peripheral Blood Flow, and Blood Volume Changes in Normal Individuals Subjected to Varying Environmental Temperatures 123
Discussion 132

Walls, Effect of Heat Storage and Variation in Outdoor Temperature and Solar Intensity on Heat Transfer Through, by J. S. ALFORD, J. E. RYAN AND F. O. URBAN 369
Discussion 396

Walls, The Flow of Heat Through, by F. E. GIESECKE 441
Discussion 457

Warm-Air Furnaces in the Research Residence, Performance of Stoker-Fired and Hand-Fired, by A. P. KRATZ, S. KONZO AND R. B. ENGDAHL 297
Discussion 320

Washington, D. C., and Other Metropolitan Districts, Summer Cooling Requirements in, by F. C. HOUGHTEN, CARL GUTBERLET AND ALBERT A. ROSENBERG 577
Discussion 587

Water Heaters Fired with Solid Fuels, Evaluating Performance of, by H. J. ROSE AND R. C. JOHNSON 499
Discussion 506

Water Heaters, Heat Transfer in Storage, by D. W. NELSON AND A. A. ROSENBERG 213
Discussion 227

WATT, LIEUT. COMDR. R. M., JR., Discussion on Air Condtioning in Industry.. 107

Weather Data in Design, Application of Summer, by JOHN EVERETTS, JR. 431
Discussion 439

Weather Data in the United States, Analysis of Summer, by J. C. ALBRIGHT.. 397
Discussion 428

WEITZEL, P. H., Discussion on Smoke-Producing Tendencies in Coals of Various Ranks 336

WIGGS, G. L., Discussion on Analysis of Summer Weather Data in the United States 429

WIGGS, G. L., Discussion on Application of Summer Weather Data in Design.. 439

WILLIAMS, MARVIN M. D., BAYARD T. HORTON AND CHARLES SHEARD, Skin Temperatures of the Extremities and Effective Temperature 135

WILLIAMS, MARVIN M. D., PH.D., GRACE M. ROTH, PH.D., BAYARD T. HORTON, M.D., AND CHARLES SHEARD, PH.D., The Role of Extremities in the Dissipation of Heat from the Body in Various Atmospheric and Physiological Conditions 135
Discussion 151

XUM

WINSLOW, PROF. C.-E. A., Discussions on Air Conditioning in Industry 106
Cardiac Output, Peripheral Blood Flow, and Blood Volume Changes in Normal Individuals Subjected to Varying Environmental Temperatures 132
WINSLOW, C.-E. A., Recent Advances in Physiological Knowledge and Their Bearing on Ventilation Practice 111
WITHERIDGE, WILLIAM N., AND CONSTANTIN P. YAGLOU, Ozone in Ventilation —Its Possibilities and Limitations 509
Discussion 520
WITHERIDGE, W. N., Discussion on Ozone in Ventilation—Its Possibilities and Limitations 521
WRIGHT, D. K., JR., L. J. SEIGEL AND G. L. TUVE, The Use of Air-Velocity Meters 645
Discussion 661
Authors' Closure 662

Y

YAGLOU, C. P., Discussion on Ozone in Ventilation—Its Possibilities and Limitations 522
YAGLOU, CONSTANTIN P., AND WILLIAM N. WITHERIDGE, Ozone in Ventilation —Its Possibilities and Limitations 509
Discussion 520
YOUNG, H. J., Discussion on Effect of Size and Type of Air Inlet and Outlet on the Heat Output of Convectors 544

Z

ZALOVCIK, J. A., N. IVANOVIC, F. C. HOUGHTEN AND J. B. SCHMIELER, Frictional Resistance to the Flow of Air in Straight Ducts 35
Discussion 58